

MARKOV, Gennadiy Yevgen'yevich; BUKANOVA, L.P., red.; KOZLOVA, T.A.,
tekhn. red.

[Peoples of Indonesia] Narody Indonezii; uchebnoe posobie.
Moskva, Izd-vo Mosk. univ., 1963. 38 p. (MIRA 16:7)
(Indonesia--Ethnology)

VOSKRESENSKIY, Yuriy Vladimirovich; BUKANOVA, L.F., red.

[Strides of industry] Shagi industrii. Moskva, Znanie, 1965.
46 p. (Novoe v zhizni, nauke, tekhnike. I seria: Istoriia,
no.19) (MIRA 18:12)

VENDEL'SHTEYN, B.Yu.; BUKANOVA, M.G.; GORBENKO, A.S.; ISHMETOV, M.G.;
SKIBITSKAYA, N.A.; MANCHEVA, N.V.; SHVARTSMAN, M.D.; DAKHNOV,
V.N., doktor geol.-miner. nauk, prof., red.; KUZ'MINA, N.N.,
ved. red.; POLOSINA, A.S., tekhn. red.

[Album of nomograms and charts for interpreting the data of
geophysical methods for studying wells] Al'bom nomogrammi i
paletok dlia interpretatsii dannykh geofizicheskikh metodov
issledovaniia skvazhin. Pod red. V.N.Dakhnova. Moskva, Gos-
toptekhzdat, 1963. 61 p. (MIRA 16:11)
(Prospecting--Geophysical methods)

BUKANOVA, V.I.

Antibiotic properties of certain sour milk products. Gig. sanit.,
Moskva no.8:32-37 Aug 1952. (GML 23:2)

BUKANOVA, V. I.

BUKANOVA, V. I.: "The lactose-collecting yeasts of kefir and their importance in the quality of kefir". Moscow, 1955. Min Trade USSR. Moscow Inst of National Economy imeni G. V. Plekhanov. (Dissertations for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

SALMANOVA, L.S.; BUKANOVA, V.I.

Selecting the efficient producer of cytolytic enzymes. Trudy
TSentr.nauch.-issl.inst.piv.,bezalk. i vin.prom. no.9:48-53 '62.
(MIRA 16:10)

SALMANOVA, L.S.; BUKANOVA, V.I.

Food media for obtaining the mother culture for *Trichothecium roseum* fungi, a producer of cytological ferments. *Izv.vys.ucheb.zav.*; *pishch.tekh.* no.1:109-110 '64. (MIRA 17:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut pivo-bezalkogol'noy i vinnoy promyshlennosti i Moskovskiy tekhnologicheskiy institut *pishchevoy promyshlennosti*.

SALMANOVA, L.S.; BUKANOVA, V.I.

Optimum conditions for the culture of the *Trichothecium roseum*
mold for the production of cytolytic enzymes. *Ferm. i spirit. prom.*
30 no.5:22-25 '64. (MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut pivo-bezalkogol'noy
i vinoy promyshlennosti.

SALMANOVA, L.S.; BUKANOVA, V.I.

Effect of the carbohydrate and nitrogen composition of the nutrient medium on the hemicellulase activity of the fungus *Trichothecium roseum*. *Mikrobiologiya* 33 no.6:1042-1047 N-D '64.

1. Tsentral'nyy nauchno-issledovatel'skiy institut pivo-bezalkogol'noy i vinnoy promyshlennosti, Moskva. (MIRA 18:4)

BUKAR', V.N., inzh.

Good work is performed by the linemen of Okhotsk Electric Line
Engineering Center. Vest. sviazi 19 no.7:26-27 J1 '59.

(MIRA 13:8)

1. Okhotskiy lineyno-tekhnicheskiy uzel.
(Okhotsk District--Electric lines--Overhead)

BUKARESTI, I.; KASZA, L.; HADNAGY, Cs.; CSIKI, I.N.; HANTZ, A.

Investigations in connection with the clinical value of the polarographic method. Investigations in the field of internal medicine. Rumanian M
Rev. no.4:27-34 '61.

(CHEMISTRY, ANALYTICAL)

BUKARESTI, LAOISLAU

1. Colorimetric determination of albumin and globulin in blood serum. Andrei Kovacs and Ladislau Bukaresti (I.M.P., Törög Mures, Rumania). *Rev. Populare Roumaine, Studiul Cercetării Stiinț.* 5, 419-22 (1964) (French summary).—To det. total proteins, digest 1 ml. of a dilut. serum soln. (0.1 ml. in 50 ml. H₂O) with 0.05 ml. concd. H₂SO₄ until fumes appear, cool, add 0.3 ml. H₂O, heat 15 sec. following the discoloration of the soln., cool, add 10 ml. H₂O, 0.3 ml. 80% NaOH, and, after mixing, 0.5 ml. Fraser's reagent. Prep. a blank and titrate with standard NH₄Cl or (NH₄)₂SO₄ until the color of the blank equals that of the sample. To det. the albumin content, centrifuge 1 ml. of the serum with a mixt. of methylal and MeOH (4:1), pipet 0.1 ml. from the supernatant dil. in 50 ml. H₂O, and proceed as above. Gary Gerard

CH

(1)

RUMANIA / Virology. Human and Animal Viruses. Hepatitis
Viruses.

E-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 90634

Authors : Bukaresti, L.; Kasza, L.; Zillmann, V.; Gross, K.; Kovacs,
E.; Csiki, I.; Gagy, R.

Inst : Not given

Title : Polarographic Studies in Epidemic Hepatitis.

Orig Pub : Rev. med. (RPR), 1956, 2, No. 2, 16-22.

Abstract : No abstract given.

Card 1/1

EXCERPTA MEDICA Sec 6 Vol 14/6 Internal Med. June 60

3650. THE VALUE OF POLAROGRAPHY IN THE DIFFERENTIAL DIAGNOSIS OF HEPATOCELLULAR AND MECHANICAL ICTERUS - A polarographia értéke a hepatocellularis és a mechanicus icterusok elkülönítő kóriszméjében - Kasza L., Bukaresti L. and Hadnagy Cs. Marosvásárhelyi Fertőzőbet. Klin., Tîrgu-Mureş - ORV. SZLE 1958, 4/1 (29-36) Graphs 1 Tables 1

With the Brdicka method the height of the catalytic wave of the deproteinized blood serum filtrate was determined in 104 hepatocellular and 32 mechanical icterus cases. The average value obtained in the hepatocellular cases was 19.22 mm.; normal values were only found in 4.8% of the cases. In the mechanical icterus the average value was 50.05 mm., with only a single subnormal wave. This latter was independent of the nature of the causative factor, of the completeness or partiality of the occlusion as well as of the presence or absence of secondary lesions of the liver parenchyma. The resulting differences obtained in hepatocellular and mechanical icterus were so significant and so regular, that the polarogram, determined from the deproteinized blood serum filtrate, can be considered as an almost decisive differential sign.

COUNTRY	: RUMANIA
CATEGORY	: Laboratory Equipment. Apparatus, Their Theory, Construction and Application
ABS. JOUR.	: RZKhim., No. 1 1960, No. 1013
AUTHOR	: Kovacs, E.; Bukaresti, L.
YRST.	: -
TITLE	: Simple Vessel for Serial Polarographic Analysis
ORIG. PUB.	: Rev. mod. (RPR), 1959, 5, No 1, 98-99
ABSTRACT	: The principal parts of the apparatus are: test tube of 17 mm diameter and height of 65 mm; connecting piece of diameter 24 mm and length 55 mm closed from above with a rubber stopper, through which the following are introduced: a capillary for drop cathode, Pt contact for the anode, tube for the supply of inert gas (H ₂ , N ₂) and a microburette; funnel having a lower part length of 110 mm and that of the
CARD:	1/3

COUNTRY :
CATEGORY :

F

ABS. JOUR. : RZKhim., No. 1 1960, No.1013

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : upper part 45 mm, upper part diameter 36 mm,
cont'd and fastened to a stand. The test tube into
which a small quantity of Hg (anode) and the
investigated solution are poured in is placed
into the upper part of the funnel filled with
water and is closed with a connecting piece
from above; thus, the investigated solution
is separated from the atmosphere with a
liquid seal in the funnel. After a polarogram

CARD: 2/3

F-18

COUNTRY	:	
CATEGORY	:	F
ABS. JOUR.	:	RZKhim., No. 1 1960, No. 1013
AUTHOR	:	
INST.	:	
TITLE	:	
ORIG. PUB.	:	
ABSTRACT cont'd	:	is taken the funnel is lowered down, the test tube is withdrawn, and the interior space of the connecting piece is washed through with a stream from below, following which the apparatus may be assembled for the next analysis. The merits of the apparatus lie in the facility of its manufacture and the rapidity of changing the test tube, which is of importance in serial analyses.-- A. Sheynin
CARD:		3/3

KASZA, Laszlo, dr.; BUKARESTI, Laszlo

Study on the ;olarographic activity of protein-free serum filtrates
in the differential diagnosis of hepatocellular and obstructive
jaundice. Orv.hetil.101 no.29:1019-1023 17 J1 '60.

1. Marosvasarhelyi Orvostudományi és Gyógyszerészeti Felsőoktatási
Intézet, Fertőzőbetegségek Klinikája és Általános Kémia és
Biokémiai Tanszék (Tirgu-Mures, Roman Népköztársaság)
(JAUNDICE OBSTRUCTIVE blood)
(HEPATITIS blood)

BUKAREV, I.F., inzh.

Initial damming of a river with an eroding bed. Energ. stroi.
no.22:63-66 '61. (MIRA 15:7)

1. Moskovskiy filial instituta "Orgenergostroy".
(Chulym River—Cofferdams)

BUKAREV, I.F.

Assembly of the precast elements of the main building of the
Tom-Usa State Regional Electric Power Plant. Prom.stroi. 40
no.4:9-14 '62. (MIRA 15:5)
(Tom-Usa---Electric power plants)

BUKAREV, I.F., inzh.

Construction of cofferdams for the foundation pit of the water-raising dam of the Nazarovo State Regional Electric Power Plant.
Energ. stroi. no.27:27-29 '62. (MIRA 15:9)

1. Moskovskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel'stva.
(Nazarovo—Electric power plants) (Chulym River—Cofferdams)

BUKAREV, I.F., inzh.

Assembly of the prefabricated sections of the underground portion of the main structure of a power plant using crawler cranes. Energ. stroi. no.34:12-16 '63. (MIRA 17:1)

1. Moskovskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel'stva.

BUKAREV, P. I.

PA 14/49T29

USSR/Engineering
Stresses, Thermal
Engines, Internal Combustion

Aug 48

"Methods for Preventing Breakage of the Cylinder
Heads of Internal Combustion Engines," P. I.
Bukarev, Engr, 1 $\frac{1}{2}$ pp

"Vest Mashinostro~~y~~" No 8

Describes modifications to 4-cycle diesel water-
cooled cylinder heads in order to relieve tempera-
ture stresses and thus prevent formation of cracks.

14/49T29

...v, P. I.

PA 56/49T34

USSR/Engineering
Mechanization
Crankshafts

May 49

"Mechanization of the Burnishing Process for
Crankpins of Diesel Crankshafts," P. I. Bukarev,
2 pp

"Energet Byul" No 5

Discusses usual difficulties prevalent in burnishing
crankpins which have lost their cylindrical form
or suffered more extensive damage. Describes new
method using an electric motor and belt drive
which makes it possible to complete the operation
without dismantling the engine.

56/49T34

BUKAREV, V.A.

Device for measuring fluctuations in recording radioactive
emission. Prib. i tekh. eksp. no.3:104-105 My-Je '60. (MIRA 14:10)

1. Fizicheskiy institut AN SSSR.
(Electronic instruments)

S/903/62/000/000/014/044
B102/B234

AUTHORS: Benetskiy, B. A., Betin, Yu. P., Bukarev, V. A., Frank, I. M.

TITLE: (n, γ) -correlation in inelastic scattering of 14-Mev neutrons from C^{12} nuclei

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiakh; trudy Vtoroy Vsesoyuznoy konferentsii, iyul' 1960.g. Ed. by A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 178-179

TEXT: 14-Mev neutrons from a $T^3(d, n)He^4$ source were scattered from a toroidal carbon scatterer; the γ -rays were recorded by a NaI(Tl) scintillation detector with $\Phi\gamma$ -29 (FEU-29) photomultiplier, the neutrons by a stack of plates of an organic scintillator separated by plexiglas and connected with an $\Phi\gamma$ -24 (FEU-24) multiplier. Also the recoil protons with $7 \text{ Mev} \leq E_p \leq 14 \text{ Mev}$ were recorded. The pulse-height resolution of the γ -detector was 10% for Tn^{65} 1.12-Mev quanta; the coincidence circuit had a time resolution of $2 \cdot 10^{-7}$ sec. The γ -spectrum was analyzed with the help of a pulse-height analyzer. The angular distribution of the 4.4-Mev quanta emitted on the transition of the C^{12} nucleus from the first excited to the

Card 1/2

(n,γ)-correlation in inelastic...

S/903/62/000/000/014/044
B102/B234

ground state ($2^+ \rightarrow 0^+$) could be described by $f(\vartheta) = A + \sin^2(\vartheta - \vartheta_0)$ (cf. Ann. Phys., 2, 471, 1957) with $A = (0.27 \pm 0.14)$ and $\vartheta_0 = (80 \pm 13)$. The anisotropic part of the $f(\vartheta)$ function has the same character, independent whether the angle of emission of inelastically scattered neutrons is fixed or not.

ASSOCIATION: Fizicheskii institut im. P. N. Lebedeva AN SSSR (Physics
Institute imeni P. N. Lebedev AS USSR)

Card 2/2

L 17605-63

EWT(1)/EWT(m)/BDS

AFFTC/

S/056/63/044/003/012/053

ASD

AUTHOR:

Bukarev, V. A.

TITLE:

Mossbauer effect on Sn^{119} nuclei and an attempt to detect the effect in Pr^{141}

PERIODICAL:

Zhurnal eksperimental'noy i tekhnicheskoy fiziki, v. 44, no. 3, 1963, 852-857

TEXT: The investigation was prompted by discrepancies in the results for Sn reported by various authors. The present paper reports on the isomer energy shifts of the 23.8 keV γ -rays from Sn^{119m} determined for several tin compounds. Results are summarized and compared with the data from other authors in Table 1. Most of the results were obtained at liquid nitrogen temperatures. Quadrupole splitting was found in a number of compounds (e.g., SnO_2 , $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$, etc.). The lower limit of variation of the effective charge radius of the Sn^{119} nucleus in the excited state is $\Delta R/R \geq +0.8 \cdot 10^{-4}$. The authors attempted also to detect the Mossbauer effect by absorption or scattering of Ce^{141} 145 eV γ -rays on Pr^{141} nuclei. To within 0.2% no resonance absorption effect was found for the 145 keV γ -transition $7/2^+ \rightarrow 5/2^+$ in Pr^{141} nuclei in the range ± 8 mm/sec. There are 3 figures and 1 table.

Card 1/3

L 17605-63

S/056/63/044/003/012/053

6

Mossbauer effect on Sn^{119} nuclei...

Table 1

Соединение (a)	(b) Сдвиг, мм/сек		
	Данные ФИАИ (c)	Данные МГУ (d)	Данные Ин-ла и др. (e)
SnF_4			-0,44
SnO_2	0	$\leq 0,13$	-0,01
$\text{Na}_2\text{SnO}_3 \cdot 3\text{H}_2\text{O}$	0		
SnBr_4	$0,20 \pm 0,05$	$0,20 \pm 0,09$	
$\text{SnCl}_4 \cdot 5\text{H}_2\text{O}$	$0,25 \pm 0,05$	$0,28 \pm 0,13$	0,10
$\text{SnCl}_4 \cdot 2(\text{C}_2\text{H}_5(\text{NH}_2)_2)^+$	$0,25 \pm 0,05$		
$[\text{SnCl}_6]^{2-} \cdot 2x - \text{An}^+$	$0,40 \pm 0,10$		
$(\text{NH}_4)_2\text{SnCl}_6$	$0,50 \pm 0,10$	$0,42 \pm 0,19$	
SnCl_4	$0,85 \pm 0,10$		
SnS_2		$1,07 \pm 0,25$	1,16
SnBr_4	$1,15 \pm 0,25$		
SnJ_4		$1,64 \pm 0,25$	1,86
$\alpha\text{-Sn}$	$2,00 \pm 0,10$		2,06
SnNb_3		$2,26 \pm 0,19$	
$\beta\text{-Sn}$	$2,55 \pm 0,15$	$2,77 \pm 0,25$	
SnO (tetrag.) (f)		$2,77 \pm 0,19$	2,76
SnF_2		$2,96 \pm 0,38$	3,66
SnS			3,33
$\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$	$3,55 \pm 0,15$		4,76
SnCl_2		$3,86 \pm 0,38$	4,76
SnSO_4	$3,95 \pm 0,15$		

* Исследовано совместно с лабораторией В. И. Гольдманского (Институт химической физики).

Card 2/3

L 17605-63

S/056/63/044/003/012/053

2

Mossbauer effect on Sn^{119} nuclei...

Text to Table 1: a - Compound; b - [Energy] shift, mm/sec; c - Data from FIAN (Physics Institute of the Academy of Sciences); d - Data from MGU (Moscow State University); e - Data by Boyle et al. (Ref. 10: Proc. Phys. Sec., 79, 416, 1962); f - tetragonal; * - Investigated jointly with the laboratory V. I. Gol'danskiy (Institute of Physical Chemistry).

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSR (Physics Institute im. P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: October 4, 1962

Card 3/3

BUKAREV, V.A.; POPOV, V.I.

Excitation of La^{139} and Pr^{141} levels in inelastic neutron scattering. IAd. fiz. 1 no.3:443-447 Mr '65. (MIRA 18:5)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR.

USSR/Cultivated plants - Grains.

h.

Abs Jour : Dokl. Akad. Nauk - Biol., No 10, 1956, 14079

Author : Bukarev, V.M.

Inst : Tadzhik Scient. Research Institute for Agriculture

Title : An experiment in sowing soyas on the arid soil of Tadzhikistan.

Orig Pub : Byul. nauchno-tekhn. inform. Tadzh. n.-i. in-t zemled., 1957, No 1, 18-19.

Abstract : No abstract.

Card 1/1

BUKAREV, V.N.; YEVSEYEV, V.F.

Practice in repairing the EPD electronic recording potentiometers and
EMD electronic recording bridges. Priborostroenie no.7:28 JI '62.
(MIRA 15:7)

(Electronic instruments—Maintenance and repair)

1. BUKAREV, V. M.; NEVZOROF, V. V.
2. USSR (600)
4. Tajikistan--Forage Plants
7. Feed resources on non-irrigated crop lands of Tajikistan, Korm. baza, 4, No. 1, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

S/191/62/000/011/018/019
B101/B186

AUTHOR: Bukarev, V. N.

TITLE: Efficient control and automatic regulation of temperature
in molding of plastics

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 67-68

TEXT: As the МРЩТр-54 (MRShchPr-54) temperature regulators used in the molding of plastics operate with deviations of $\pm 25^{\circ}\text{C}$, a bimetallic automatic control and recording relay was provided with the recording potentiometer, type ЭПП-09М1 (EPP-09M1). Increased temperature untwists the bimetallic coil, so that a contact is closed and the heating is switched off by a magnetic starter, the temperature being recorded. The relay can be used up to $250-300^{\circ}\text{C}$, and centralized temperature control from one switchboard is possible. Regulation being accurate to within $\pm 2.5^{\circ}\text{C}$ saves power and avoids rejects due to overheating. There are 2 figures.

Card 1/1

621.311.6 : 621.327.9
4841. SUPPLY CIRCUITS FOR HIGH REPETITION WORKING
OF PHOTO-FLASH TUBES. A.A. Bakareva and A.L. Vasserman.
Svetotekhnika, 1957, No. 5, 14-15. In Russian.
The circuit given by A.S.V. McKenzie and D.B. Cleland, (Abstr.
3031/1953) is modified to use Russian tubes and to obtain flash
recurrence frequencies up to 2000 p.p.s. P. Collins

3

NT

Московский электротехнический завод.

IVANOV, V.P.; VASSERMAN, A.L.; BUKAREVA, A.A.; ZHIL'TSOV, V.P.

Power supply for pulse lamps operating under conditions of high
repetition rates of flash. Usp.nauch.fot. 6:62-63 '59. (MIRA 13:6)

(Photography, Flash light)
(Electric discharge lighting)

BUKHARIN, N.A., doktor tekhn. nauk; YERMOLAYEV, A.I.;
SNYTIN, M.Ye., kand. tekhn. nauk

Evaluation of operational reliability and durability of
parts and units of a motor vehicle. Avt. prom., 29 no.8:
25-27 Ag '63. (MIRA 16:11)

1. Leningradskiy inzhenerno-stroitel'nyy institut i
Moskovskiy avtozavod imeni Likhacheva.

BUKARINOVA, P. V.

Antimony ruby glass. P. H. Bukarimova and A. A. Kefeli. *Steklo* 1960, 15, No. 8, p. 28 (11, 1960). Soda lime glasses are satisfactory for the production of antimony ruby. The optimum concentrations of Sb, S and C are: (a) with 1.5% Sb_2O_3 , 0.15 1.5% S and 1.25 0.15% C; (b) with 3% Sb_2O_3 , 0.30 1.5% S and 1.5 0.30% C. Soda lime glasses contg. 0.5% Sb are not suitable for obtaining antimony ruby as they are very dark and are little permeable to visible light. With the introduction of small amounts of S and C, glasses remain yellow; with larger amounts, they become dark and little permeable. The rubies produced are in the majority of cases dark red. Curves of spectral absorption of the visible part of the spectrum have a gentle slope, which fact distinguishes them from selenium ruby; however, they have a great similarity to those of copper ruby. Antimony ruby can be used as decorative and signal red glass. Zinc glasses are unsuitable for antimony ruby because Zn combines with S during melting and forms a compound, which is too stable.

M. V. Condole

ASB 514 METALLURGICAL LITERATURE CLASSIFICATION

STEEL DIVISION

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BUKARINOVA, P.V.
A.E.S.

Thermal stability of Se ruby. P. V. BUKARINOVA AND A. A. KAPILI. *Steklozarya Press*, 1948, No. 11-12, pp. 27-30; *Khim. Referat. Zhur.*, 4 [6] 64 (1941).—The authors investigated the effect of B_2O_3 on the color of Se ruby and on the increase of its thermal resistance. The B_2O_3 was added in place of Na_2O . The glasses prepared contained 5, 10, 15, and 20% B_2O_3 and, correspondingly, 20, 15, 10, and 8% Na_2O . The authors recommend a glass of the following composition: SiO_2 67, B_2O_3 15, ZnO 10, Na_2O 8, Se 0.6, CdS 0.8, and $CdCO_3$ 1%. See "Antimony..." *Ceram. Abs.*, 19 [6] 135 (1940) M.Ho.

BUKARINOV, P. V.

PA 607103

USSR/Physics
Filters, Ultraviolet
Glass

Jul 1947

"Influence of the Iron Content Upon the Conductivity
of Ultraviolet Rays by Glass," P. V. Bukarinova,
I. A. Pleteneva, Lab for Heat Processing of Glass,
State Optical Inst, 4 pp

"Doklady Akad Nauk SSSR, Nova Ser" Vol LVII, No 2

Experiments were conducted on four types of glass
utilized in manufacture of ultraviolet filters.
Table lists composition of glass. It was determined
that to attain similar degrees of light conductivity
silicate glass could contain ten times more iron
oxide than borate glass. Submitted by Academician
I. V. Grebenshchikov, 17 Dec 1946

607103

Bukarina, P. V.

✓ Calculation of composition of glasses having low crystallization capacity. YU. V. AKSENOVA, P. V. BUKARINOVA, L. N. GOLUB-YATNIKOVA, L. I. DEMKINA, AND Z. N. SICHEGLOVA. *Steklo i Keram.*, 12 [3] 7-11 (1955).—In developing the composition of acid optical glasses, a dependence was observed between molar percentage composition and crystallization capacity. Multicomponent glasses were projected on the composition triangle of $K_2O-Na_2O-SiO_2$. From the ratio of K_2O/Na_2O in multicomponent glass, its projection on the curve of the same K_2O/Na_2O in the triangle of $K_2O-Na_2O-SiO_2$ is determined with the aid of $\Delta SiO_2 = SiO_2 - 4K_2O - 2(Na_2O + PbO + B_2O_3) - (CaO + BaO) - 0.5(ZnO + MgO)$. Crystallization capacities of 22 glasses were determined experimentally and plotted on the triangle for each projected multicomponent glass. Results show the relationship between crystallization capacity and composition.

B.Z.K.

S/065/61/000/008/004/009
E030/E335

AUTHORS: Silich, M.I., Sidorov, I.P., Martynova, L.L.,
Bukarov, A.R., Yulusov, A.A. and Kisil', I.M.

TITLE: Improved Process for Obtaining Alcohols by the
Oxo-synthesis Method With Suspended Catalyst

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961,
No. 8, pp. 19 - 24

TEXT: The authors mention briefly the drawbacks of the existing technological schemes for obtaining alcohols by oxo-synthesis. The main drawbacks of the scheme with suspended catalyst are the erosion of the throttle elements, the need for paste pumps for transporting the catalyst (which is in suspension in the liquid) and the existence of a filtering section which work intermittently. Periodic switching between gas and liquid streams, a complicated automatic control and the decomposition of the cobalt carbonyls (decobal-tisation) are the chief drawbacks of the other two schemes. The present paper deals with improving the scheme with suspended catalyst. The tests were carried out on a model and in a pilot plant. In the present process the synthesis occurs

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E030/E335

Improved Process

in the liquid phase and therefore a solvent is used which is isobutyl alcohol at the start of the reaction, changing to the final product as the reaction proceeds. In the laboratory tests a propane-propylene feedstock with 74 to 85% propylene was used, the ratio of raw material to solvent being nearly 1:2 and that of CO to hydrogen 1:1.2. In the pilot plant, synthesis gas was used as feed, with the ratio of hydrogen to carbon monoxide varying between 0.5:1 to 7.5:1, the other parameters being nearly the same as those in the laboratory tests. In order to eliminate the deficiency in the filter system, a re-cycle system using a centrifugal separator was introduced. This system (developed in conjunction with NIIKhIMMASH under the direction of Senior Engineer G.K.Ivanova) enables the filters to work for long periods without cleansing and, by returning the catalyst-rich fraction to the reactor, diminishes the quantity of product going for decobaltisation, filtering, hydrogenization and rectification. Thus, the process of obtaining butyl alcohols is carried out in three stages: 1) production of cobalt carbonyls and hydroformylation of propylene; 2) decomposition of cobalt carbonyls

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Improved Process

(decobaltization) and 3) hydrogenization of aldehydes and alcohols. In the previous two-stage process only alcohols were obtained as the final product; in the present three-stage one aldehydes also are obtained. It has been shown that by hydroformylation at 300 atm. and 125 °C the content of n-aldehydes in the final product increases. It has also been found that at temperatures of 110 to 140 °C and pressures of 25 to 100 atm the catalyst decomposes completely. At 135 °C and 300 atm. propylene converts to n-aldehydes (63%), iso-aldehydes (21%), high aldehydes (11.4%) and by-products (46%), the ratio of n- to iso-aldehydes being 3:1. With decreasing pressures this ratio decreases, being 2.2:1 at 250 atm. and 1.6:1 at 200 atm. During the oxo-reaction carried out in the pilot plant at temperatures between 135 and 160 °C, a pressure of synthesis gas of 180-200 atm., content of catalyst of 1-2% and contact time 45 min., a product with a ratio of n- to iso-aldehydes of approximately 2:1 was obtained. This product hydrogenated in a mixture of butyl alcohols in the same ratio. G.N. Klinova, A.D. Yerofeyeva, N.M. Malygina, A.I. Khokhlov, A.I. Zaytseva, T.V. Yelisova and A.I. Busygina
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Improved Process

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E030/E335

participated in the tests. There are 3 figures, 2 tables and 11 references: 4 Soviet and 7 non-Soviet. The four latest English-language references quoted are: Ref. 3 - H. Keulemans - U.S. Patent No. 2587858, 1952; Ref. 4 - I. Mertzweeler, W.M. Smith, U.S. Patent No. 2725401, 1955; Ref. 6 - Petroleum 16, No. 10, 291, 1953; Ref. 7 - I. Kirshenbaum, K.L. Hughes - Petr. Refin., 37, No. 6, 209, 1958.

ASSOCIATION: GIAP, LKhK and OKBA

Card 4/4

ACC NR: AP7001838

SOURCE CODE: UR/0135/66/000/012/0014/0015

AUTHOR: Popenko, V. S. (Engineer); Bukarov, V. A. (Engineer); Ishchenko, Yu. S. (Engineer)

ORG: none

TITLE: Programming the regime of pulsating-arc welding of tubes

SOURCE: Svarochnoye proizvodstvo, no. 12, 1966, 14-15

TOPIC TAGS: *steel, metal tube,* automatic programming, thermal analysis method, pulse welding, arc welding / 1Kh18N9T steel

ABSTRACT: The energy introduced into the metal in order to accomplish its uniform fusion may be regulated in two ways: by varying the pulse duration or by altering the welding current intensity. Programming with respect to welding current requires high-power regulation. Hence programming with respect to pulse duration is simpler and more reliable. The design and calculation of the welding arc cycle for the pulsating-arc welding of tubes reduce to the determination of: a) number of welding impulses (weld spots) required for the continuous welding of a tube of a given diameter and thickness; b) duration of pause between impulses; c) duration of

Card 1/3

UDC: 621.791.754=546.293:534:62-503.52:62-462

ACC NR: AP7001838

impulse as a function of the tube material and dimensions. Point a) is determined as a function of the outside diameter of the tube, the outside diameter of the weld spot and the coefficient of overlap of weld spots. As for the pause between impulses, it must be the shortest possible so as to maximize the productivity of the process, yet sufficiently long to assure the solidification of the molten metal in the weld puddle so there would be no flow of molten metal from one weld puddle to the next. As for the duration of the impulse, it must be tailored to the time required to melt the puddle material. It is shown that with the aid of a family of curves of the time dependence of temperature, on employing the graphic method of plotting the thermal cycle (Fig. 1), it is possible to compile a program for the variation of the time required to reach melting point for every individual weld spot during the seam welding. Experimental formulas for determining these factors are presented, and they are used to calculate the pulsating-arc cycle for the welding of non-swivel joints of 22x3 mm tubes of LKh18N9T steel, with a welding current of 70 a and voltage of 10 v, at a welding rate of 6 m/hr. The theoretical findings thus obtained were checked by welding specimens of these tubes by means of an ATV-15-40 automatic welding machine in accordance with the experimentally selected program, and were found to be in agreement with the experimental findings. Orig. art. has: 2 figures, 3 tables.

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ACC NR: AP7001838

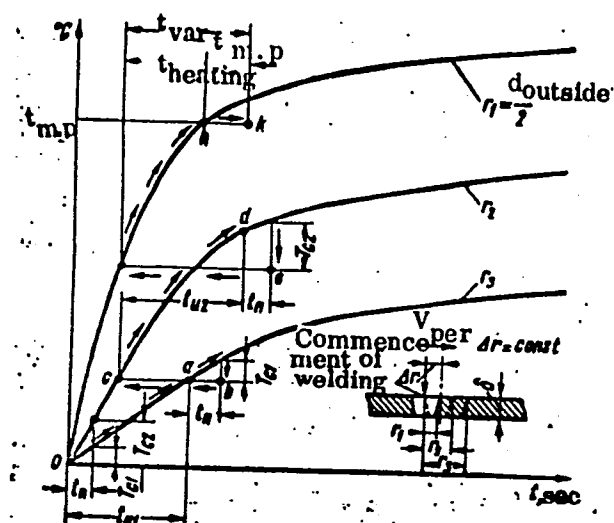


Fig. 1. Diagram for determining the heating time and pulse length as functions of temperature curves. The arrows and letters indicate the sequence of construction of the thermal cycle of the weld spot

SUB CODE: 13, 11/ SUBM DATE: none

Card 3/3

BUKHARTSEV, V.P.

Formation of local structures as a result of pulsations of regional tectonic pressures. Dokl. AN SSSR 152 no.5:1196-1199 0 '63.

(MIRA 16:12)

1. Institut geologii i razrabotki goryuchikh iskopayemykh.
Predstavleno akademikom A.A.Trofimukom.

BUKASHKIN, A.S.

Some problems of the distribution of shoe factories. Kozh.-obuv.-
prom. 4 no.4:11-13 Ap '62. (MIRA 15:5)
(Shoe industry)

L 52171-65 EWT(1)/EWA(j)/EWA(b)-2 Pa-l RO

ACCESSION NR: AP5015538

UR/0286/65/000/008/0079/0080

AUTHORS: Mal'nikov, N. N.; Grapov, A. F.; Lebedeva, N. V.; Bakumenko, L. A.; Bukashkina, Z. V.

TITLE: A method for controlling weeds. Class 45, No. 170245

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 79-80

TOPIC TAGS: agriculture, pesticide, ester, amidoester

ABSTRACT: This Author Certificate presents a method for controlling weeds by herbicides. To broaden the assortment of herbicides, amidoesters of methyl- and chloromethylphosphinic acid, with a general formula shown in Fig. 1 on the Enclosure, are used as a herbicide. Orig. art. has: 1 formula.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy (All-Union Scientific Research Institute of Chemical Means for the Protection of Vegetation)

SUBMITTED: 15Jun64

EWEL: 01

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 1/2

L 52171-65

ACCESSION NR: AP5015538

ENCLOSURE: 01

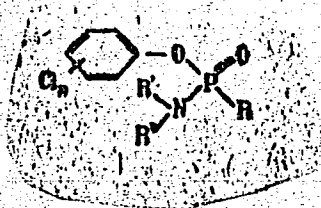


Fig. 1

R- CH₃ or ClCH₂; R' = H or alkyl C₁-C₄; R''- alkyl C₁-C₄; n- an integral number from 1 to 5

geh
Gard 2/2

~~BUKASOV, A.~~

BUKASOV, A., nachal'nik.

Difficult assignment. Kinomekhanik no.6:12-13 Je '53.

(MLRA 6:8)

1. Rayotdel kinofikatsii Lazovskogo rayona (Primorskiy kray).
(Lazo District--Moving-picture projection) (Moving-picture projection--
Lazo District)

BUKASOV, S. M., Prof.

"Potato Selection," 1948. Stalin 1 st Prize, 1948, Publ. Current Digest of the Soviet Press, Vol.1, No.15, 1949, page 16.

Bukasov, S.M.
BUKASOV, S.M.

System of potato species. Probl.bot.no.2:317-326 '55. (MLRA 8:11)
(Potatoes)

BUKASOV, Sergey Mikhaylovich; KAMERAZ, Abram Yakovlevich

[Principles of potato breeding] Osnovy selektsii kartofelia.
Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 527 p.

(MIRA 13:3)

(Potatoes)

BUKASOV, S.M.

"Behavior of wild and cultivated species of potatoes in different geographical regions of the Soviet Union" by R.L.Perlova. Reviewed by S.M.Bukasov. Bot.zhur. 44 no.12:1764-1769 D '59.
(MIRA 13:4)

1. Vsesoyuznyy institut rasteniyevodstva, Leningrad.
(Potatoes) (Perlova, R.L.)

BUKASOV, S.M.

Polyploidy in the morphology and taxonomy of potato species.
Trudy MOIP. Otd.biol 5:185-190 '62. (MIRA 16:5)

1. Vsesoyuznyy institut rasteniyevodstva, Leningrad.
(POTATOES) (POLYPLOIDY)

BUKASOV, S. M.

"The origin of species of the series Andigena, section Tuberarium,
genus Solanum (TAX)."

report submitted for 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

Inst of Plant Industry, Leningrad.

S/051/60/008/03/001/038
E201/E191

AUTHORS: Bukat, G.M., Dolginov, A.Z., and Zhitnikov, R.A.

TITLE: On the Hyperfine Structure of Many-Electron Atoms

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 3,
pp 285-293 (USSR)

ABSTRACT: The hyperfine interaction, i.e. the interaction of magnetic and electric moments of atomic nuclei with electron shells, in atoms with several valence electrons was dealt with in a number of papers (Refs 3, 4). Racah (Refs 5, 6) and Trees (Ref 4) described calculation of the magnetic-dipole and electric-quadrupole interactions of nuclei with electron shells, containing s-, p- and d-electrons, in the central field and LS-coupling approximation. Such a treatment is insufficient in the case of rare-earth atoms, whose partly filled shells contain several equivalent electrons with an orbital quantum number $l = 3$. The present paper describes a calculation of the electron matrix elements which appear in the hyperfine structure constants of atoms with several equivalent electrons in a partly filled shell. The authors discuss LS- and jj-couplings. "Genealogical"

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S/051/60/008/03/001/038
E201/E191

On the Hyperfine Structure of Many-Electron Atoms

coefficients of terms with maximal multiple-order and with f^m configurations are given in a form convenient in calculations. It is shown that using the sum rule the problem can be solved in some cases without calculation of the "genealogical" coefficients. The paper is entirely theoretical.

Card
2/2

There are 6 tables and 16 references, of which 2 are Soviet, 9 English, 1 German, 2 Japanese and 2 translations from English into Russian.

SUBMITTED: June 18, 1959

✓

88447

S/056/60/039/006/039/063
B006/B063

9,4300 (1043, 1143, 1155)

AUTHOR: Bukat, G. M.

TITLE: Calculation of 1-Forbidden Transition Probabilities

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 39, No. 6(12), pp. 1716 - 1717

TEXT: The M1-transition probability is given by.

$W_{\gamma} = 1/\tau_{\gamma} = 0.419 \cdot 10^{13} E^3 m^2 / (2j+1) \text{ sec}^{-1}$, where E is the transition energy, and $m = (j \| \sum \mu_j \| j')$ is the reduced matrix element of the transition operator. In connection with investigations of Arima et al. (Ref.1), the author has now calculated m^2 (m_{theor}^2) for 80 configurations of 14 nuclei and compared it with m_{exp}^2 . The unsatisfactory agreement between theory and experiment, especially in the case of Rb^{85} and Co^{59} , is briefly discussed. An analysis of the results indicates that M1-transitions between states with $\Delta l = 2$ can be explained when making allowance for the configuration

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Calculation of 1-Forbidden Transition
Probabilities

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mixture. Configurations for which the best agreement with experimental results was achieved, yield the correct sign of the quadrupole moment of the ground state. These configurations obey the laws established by Arima. The author thanks Professor L. I. Rusinov for supervising the work, and D. A. Varshalovich for discussions. There are 1 table and 2 references: 1 Soviet and 1 Japanese.

ASSOCIATION: Leningradskiy fiziko-tehnicheskii institut Akademii nauk
SSSR (Leningrad Institute of Physics and Technology, Academy
of Sciences USSR)

SUBMITTED: June 17, 1960

Legend to the table: 1) nucleus; 2) configuration; 3) proton configura-
tion; 4) neutron configuration; 5) type; 6) m_{theor}^2 ; 7) m_{exp}^2 .

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S/056/60/039/006/039/663.
B006/B063

Ядро I	I	I'	E, keV	τ_{γ} , сек	Конфигурация 2		тип 5	m ^{теор} 6	m ^{эксп} 7
					протонная 3	нейтронная 4			
Fe ⁵⁷	$I^{5/2}$	$P^{3/2}$	122	$1,23 \cdot 10^{-8}$	$(I^{7/2})^8$	$(I^{5/2})^2 P^{3/2}$	U	0,0339	0,0643
Co ⁵⁹	$P^{3/2}$	$I^{5/2}$	191	$< 1,6 \cdot 10^{-8}$	$(I^{7/2})^8 (P^{3/2})^4$	$(I^{7/2})^8 (P^{3/2})^4$	L	0,817	$> 0,0845$
Zn ⁶⁷	$I^{5/2}$	$P^{3/2}$	90	$2,02 \cdot 10^{-8}$	$(I^{5/2})^2$	$(I^{5/2})^8 (P^{3/2})^2$	U	0,0513	$\sim 0,0974$
Rb ⁸⁵	$P^{3/2}$	$I^{5/2}$	150	$1,14 \cdot 10^{-8}$	$(P^{3/2})^4 (I^{5/2})^3$	$(P^{3/2})^{10}$	U	0,00846	0,236
Sn ¹¹⁹	$d^{3/2}$	$s^{1/2}$	24	$1,85 \cdot 10^{-8}$	$(g^{9/2})^{10}$	$(h^{11/2})^4 s^{1/2}$	L	0,804	0,512
Te ¹²¹	$d^{3/2}$	$s^{1/2}$	213	$< 2 \cdot 10^{-9}$	$(g^{7/2})^2$	$(h^{11/2})^4 s^{1/2}$	L	0,703	$> 0,0458$
Xe ¹²⁹	$d^{3/2}$	$s^{1/2}$	40	$0,7 \cdot 10^{-8}$	$(g^{7/2})^4$	$(h^{11/2})^{10} s^{1/2}$	L	1,11	2,51
					$(g^{7/2})^2 (d^{5/2})^2$	$(h^{11/2})^{10} s^{1/2}$	L	1,20	
					$(d^{5/2})^4$	$(h^{11/2})^{10} s^{1/2}$	L	1,22	
Cs ¹³¹	$g^{7/2}$	$d^{5/2}$	122	$4 \cdot 10^{-9}$	$(g^{7/2})^4 d^{5/2}$	$(h^{11/2})^{10} (s^{1/2})^2$	L	0,144	0,201
					$(g^{7/2})^4 d^{5/2}$	$(h^{11/2})^8 (d^{5/2})^2$	L	0,109	
					$(g^{7/2})^4 d^{5/2}$	$(s^{1/2})^2$	L	0,183	
					$(g^{7/2})^4 d^{5/2}$	$(h^{11/2})^{10} (d^{5/2})^2$	L	0,144	
Cs ¹³³	$s^{1/2}$	$d^{5/2}$	53	$\leq 2,37 \cdot 10^{-8}$	$(g^{7/2})^4 d^{5/2}$	$(h^{11/2})^{10} (d^{5/2})^2$	L	0,639	$\geq 0,134$

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La ¹³⁷	$d^{3/2}$	$g^{7/2}$	10	$<10^{-7}$	$(g^{7/2})^2$	$(h^{11/2})^{10}(d^{3/2})^2$	L	0,837	$>0,104$
					$(d^{3/2})^2(d^{3/2})^2$	$(s^{1/2})^2$	L	1,07	
					$(d^{3/2})^2(d^{3/2})^2$	$(h^{11/2})^{10}(d^{3/2})^2$	U	0,103	
					$(g^{7/2})^2(d^{3/2})^2$	$(s^{1/2})^2$	L	0,114	
Pr ¹¹³	$g^{7/2}$	$d^{3/2}$	57,4	$<10^{-8}$	$g^{7/2}(d^{3/2})^2$	$(h^{11/2})^{10}(d^{3/2})^2$	U	0,118	$>0,00146$
					$(g^{7/2})^2(d^{3/2})^2$	$(s^{1/2})^2$	U	0,00784	
					$(g^{7/2})^2(d^{3/2})^2$	$(h^{11/2})^{10}(d^{3/2})^2$	L	0,0185	
					$(g^{7/2})^2(d^{3/2})^2$	$(h^{11/2})^{10}(d^{3/2})^2$	U	0,676	
I ¹⁶²	$s^{1/2}$	$d^{3/2}$	73	$6 \cdot 10^{-9}$	$(h^{11/2})^2(d^{3/2})^2$	$(i^{13/2})^2$	U	0,00293	0,00968
					$(s^{1/2})^2$	$(i^{13/2})^2$	L	0,0963	
					$(h^{11/2})^{10}(d^{3/2})^2$	$(i^{13/2})^2$	U	0,0606	
					$(s^{1/2})^2$	$(i^{13/2})^2$	L	0,139	
Au ¹⁰⁷	$s^{1/2}$	$d^{3/2}$	77	$1,9 \cdot 10^{-9}$	$(h^{11/2})^{10}(d^{3/2})^2$	$(i^{13/2})^2$	L	0,0618	$\geq 0,0142$
					$(s^{1/2})^2$	$(i^{13/2})^2$	U	0,0618	
Tl ²¹⁷	$d^{3/2}$	$s^{1/2}$	353	$\leq 1,2 \cdot 10^{-9}$	$(d^{3/2})^2(s^{1/2})^2$	$(i^{13/2})^2$	U	0,0618	$\geq 0,0142$
					$(d^{3/2})^2(s^{1/2})^2$	$(i^{13/2})^2$	U	0,0618	

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S/048/62/026/002/011/032
B101/B102

AUTHOR: Bukat, G. M.

TITLE: Spectrum of Pb^{205} energy levels

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
v. 26, no. 2, 1962, 227 - 234

TEXT: The calculation methods of L. A. Sliv et al. (Zh. eksperim i teor fiz., 37, 1151 (1959); 40, 946 (1961); 41, no. 10, 1274 (1961)) were used to elucidate the role of pair energies, pair correlations, and of the

interaction with the nuclear surface by the example of Pb^{205} , a nucleus with three neutron holes. The energy matrix was calculated with the

functions $|nJ, NR, IM\rangle = \sum_{m, m'} C_{Jm, Rm}^{IM} |nJm\rangle |NRm\rangle$. n particles with the

momentum J are vectorially coupled with N phonons with the momentum R. (total momentum I). $|nJm\rangle$ is a function which is entirely antisymmetric with respect to particles of the same kind (protons or neutrons). For three particles (holes) it has the form $|nJm\rangle = N A |l_1 j_1 l_2 j_2 l_3 j_3 Jm\rangle$.

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Spectrum of Pb^{205} energy levels

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B101/B102

where $l_1 j_1$ is the single-particle state, J_{12} is the intermediate momentum, to which the momenta of the first and the second particle are added, J is the total momentum of the three particles, A is the operator of anti-symmetrization, and N is a normalizing factor. The energy matrices were diagonalized by means of electronic computers. Together with the level energies the relevant wave functions were obtained, i.e., the mixing of configurations with particle and vibrational states was taken into account, and the probability of transitions and quadrupole moments was computed. The computation was restricted to the energy sum of the three holes between 3 and 3.5 Mev. The parameters $\hbar\omega$, C , v_s , and v_t were varied to obtain agreement with experimental data of R. Stockendal (Ref. 4: Arkiv fys., 17, 553 (1960)) and Bergström et al. (Arkiv fys., 20, no. 5 (1961)). The best agreement was found at $\hbar\omega = 3$, $C = 2000$, $v_s = 15$, $v_t = 10$ (Fig. 3). The probability of E2 transitions to the ground state, $T(E2) = 0.889 \cdot 10^{12} \Delta E^5 \sum^2$, was calculated.

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Spectrum of Pb^{205} energy levels

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B101/B102

Initial state	ΔE_{exp} , Mev	ΔE_{theor} , Mev	$\sum \epsilon^2$
$1/2_1^-$?	0.240	0.0303
$7/2_1^-$	0.7033	0.678	0.00393
$9/2_2^-$	0.9876	1.015	0.00404

The main properties of nuclear spectra can be described with sufficient completeness and accuracy when allowing for pair energies, pair correlations, and for the interaction with the surface. L. A. Sliv is thanked for assistance, G. A. Sogomonova for operations performed with the BESM (BESM) and "Strela" computers, and T. Yu. Andriyevskaya for computations. There are 4 figures, 1 table, and 9 references; 2 Soviet and 7 non-Soviet. The four references to English-language publications read as follows: Pryce, M. H. L., Nucl. Phys., 2, 226 (1956/57); Bhanot, V. B. Johnson, W. H., Nier, A. O., Phys. Rev., 120, 235 (1960); Racah, G. Phys. Rev., 62, 438 (1942); Ann. Tokyo Astron. Observ., 3, 69 (1953), 4, 1 (1954), 4, 77 (1955), 5, 155 (1957); Flowers, B. H., Proc. Roy. Soc.

Card 3/4

Spectrum of Pb^{205} energy levels

S/048/62/026/002/001/032
B101/B102

A214, 515 (1952).

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk
SSSR (Physicotechnical Institute imeni A. F. Ioffe of the
Academy of Sciences USSR)

Fig. 3. Comparison between calculated spectrum (left side) and
experimental spectrum (right side). The broken lines are the levels
determined in Ref. 4 with insufficient reliability.

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45379
3/056/63/044/001/053/067
B187/B102

AUTHORS: Bukat, G. M., Sliv, L. A., Sogomonova, G. A.

TITLE: Residual pair forces in the light nuclei O^{18} and F^{18}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 1, 1963, 316-325

TEXT: The nuclei of O^{18} and F^{18} are considered to be composed of the magic core with filled shells (O^{16}) plus two nucleons moving in the potential $V = V_C + V_S + V_p$. V_C is the averaged local potential of all nucleons of the nucleus, and has been determined by L.S. Sliv and B. A. Volchok (ZhETF, 36, 539, 1959). V_S is the potential caused by the quadrupole portion of interaction between an external nucleon and the nucleons of the core. It has been calculated by V.N. Guman (ZhETF, 41, 800, 1961). V_p occurs in the presence of external nucleons and is determined by the residual forces left over after averaging. These are mainly pair forces which become active at small nucleon distances. They

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Residual pair forces in the light ...

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depend on the ordinary spin and on the isospin. The interaction potential may be represented by

$$V_p(1, 2) = -[(1 - \xi \tau_1 \tau_2) v_t \pi_t + (1 - \eta \tau_1 \tau_2) v_s \pi_s] \exp(-r_{12}^2 / \rho^2). \quad (4)$$

where v_t and v_s are parameters of triplet and singlet interactions;

$\pi_t = \frac{1}{4}(3 + \vec{\sigma}_1 \vec{\sigma}_2)$; $\pi_s = \frac{1}{4}(1 - \vec{\sigma}_1 \vec{\sigma}_2)$; ρ = effective interaction radius;

and η determine the dependence of the forces on the isospin. The method of calculation is given in brief, being described for example by V.N. Guman et al (Nucl. Phys. 28, 1961, 192). For the O^{18} and F^{18} nuclei, the lowest energy levels and also the transition probabilities of F^{18} nuclei are calculated and compared with known results. The values of ξ and η in (4) may be determined from v_t and v_s calculated for both nuclei.

Hence,

$$V_p = -[70\pi_t + 55(1 - 0.23\tau_1 \tau_2) \pi_s] \exp(-r_{12}^2 / (1.5)^2). \quad (11)$$

holds to within $\pm 10 - 15\%$ for light nuclei. The triplet forces when $T = 0$ are approximately twice those when $T = 1$; the singlet forces are

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Residual pair forces in the light ...

S/056/63/044/001/053/067
B107/B102

independent of the isospin. The transition probabilities $T(\lambda)$ between the individual levels change by 9 orders of magnitude. [Abstracter's note: 10^{14} should read 10^4 .] After elimination of the energy dependence, the values of the reduced probability $B(\pi_\lambda)$ change by 3 orders of magnitude. Despite the considerable variation, the π_λ values calculated agree fairly well with those observed. The interaction between nucleons and core is strongest in light nuclei, as the effective surface tension C decreases from 2000 to 150 in going from Pb^{206} to O^{16} . The sensitivity of the results to the parameters $\hbar\omega$ and C increases; the values calculated and observed for $\hbar\omega = 1.0 - 2.0$ are in good agreement, whereas those observed and calculated for $\hbar\omega = 3$, differ considerably. The results obtained for the spectra in the present paper are more complete and exact than those obtained either by J.P. Elliott and D.H. Flowers (Proc. Roy. Soc., A229, 1955, 536) using the shell model, or by M.G. Redlich (Phys. Rev. 110, 1958, 468) using the model of a deformed nucleus. There are 4 figures and 4 tables.

Card 3/4

Residual pair forces in the light ...

S/056/63/044/001/053/067
B107/B102

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A.F. Ioffe AN SSSR
(Physicotechnical Institute imeni A.F. Ioffe of the
Academy of Sciences USSR)

SUBMITTED: August 2, 1962

Card 1/4

DAKTYBAYEV, K.B.; BUKAT, G.M.

Alpha-decay mechanism and reduced level widths of Po^{210} and
 Po^{212} nuclei. Izv. AN SSSR. Ser. fiz. 27 no.10:1297-1304 0 '63.
(MIRA 16:10)

BUKAT, G. M.; BUKHVOSTOV, A. P.; POPOV, M. P.

.2

"Possible Experiments for the Determination of Pseudoscalar Contributions
in μ -Capture."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

FTI (Physico Technical Inst)

BAKTYBAYEV, K. B.; BUKAT, G. M.

"Alpha Decay and Nuclear Structure."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22
Feb 64.

FTI (Physico Technical Inst)

ACCESSION NR: AP4024038

S/0048/64/028/002/0214/0221

AUTHOR: Berlovich, E.Ye.; Bukat, G.M.

TITLE: Probabilities for magnetic dipole transitions in nuclei forbidden by orbital momentum selection rules [Report, Fourteenth Annual Conference on Nuclear Spectroscopy held in Tbilisi 14 to 22 Feb., 1964]

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v.28, no.2, 1964, 214-221

TOPIC TAGS: transition probability, magnetic dipole transition, orbital momentum forbidden transition, orbital momentum forbiddenness, transition matrix element, configuration mixing, proton transition, neutron transition, heavy element

ABSTRACT: The paper is devoted to review and analysis of the available data on forbidden magnetic dipole transitions, i.e., transitions forbidden by the orbital selection momentum rule, with a view to elucidating the nature of these transitions. The data, including the lifetimes, hindrance factors, calculated matrix elements and configurations involved for $1g_{7/2} \rightarrow 2d_{5/2}$ and $2d_{3/2} \rightarrow 3s_{1/2}$ proton transitions and $2d_{3/2} \rightarrow 3s_{1/2}$ neutron transitions are tabulated. The variation of the matrix elements with A for the proton transitions is plotted in the range from A = 129 to A =

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ACCESSION NR: AP4034038

= 205. The following conclusions are drawn regarding the nature and characteristics of magnetic dipole transitions forbidden with respect to orbital momentum: 1. The widely held view that the matrix element for proton transitions differ little in value and that the hindrance factor clusters about the mean value $F \approx 300$ is erroneous. Actually even for $g7/2 \rightarrow d5/2$ transitions the hindrance factor varies in the range from about 100 to 3300. 2. The smallest values of the matrix elements (largest values of F) are observed near the neutron shell with $N = 82$ and close to the double-magic region $Z = 82, N = 126$. 3. The rapid increase of the matrix element with approach to the region of deformed nuclei of the rare earth group indicates that in addition to configuration mixing a substantial role in removal of Δ forbiddenness is played by interaction of the particles with the nuclear surface. 4. The theoretical matrix elements calculated taking into account configuration mixing can be reconciled with the experimental values only for nuclei located near one or two closed shells. To obtain better agreement of the theoretical matrix elements with the experimental ones in the entire investigated nuclear region it is essential to carry out the calculations not in the framework of perturbation theory but in the manner employed in the work of L.A.Sliv and his co-workers (Zhur.eksp.i teor.fiz. 40,341,1961; Ibid.40,946,1961; Izv.AN SSSR,Ser.fiz.26,327,1962) for nuclei close to $Z = 82, N = 126$; in such calculations there must be taken into account pairing

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ACCESSION NR: AP4024038

forces, pair correlations and coupling with the surface. Orig.art.has: 2 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 14Sep63

SUB CODE: NS

DATE ACQ: 08Apr64

NR REF SOV: 007

ENCL: 00

OTHER: 021

Card 3/3

ACCESSION NR: AP4042969

S/0048/64/028/007/1229/1233

AUTHOR: Baktybayev, K.D.; Bukat, G.M.

TITLE: Reduced alpha-particle widths of bismuth 210 and the energy level spectrum of thallium 206 [Report, 14th Annual Conference on Nuclear Spectroscopy held in Tbilisi 14-21 Feb 1964]

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.7, 1964, 1229-1233

TOPIC TAGS: radioactivity, alpha decay, nuclear spectroscopy, nuclear force, bismuth, thallium

ABSTRACT: The reduced widths were calculated for alpha decay of the ground state and the 250 keV 9^- excited state of Bi^{210} to the following states of Tl^{206} : the 2^- and 3^- states at 800 and 654 keV (not necessarily respectively), the 301 keV 1^- state, the 262 keV 2^- state, and a hypothetical low-lying 1^- state. The methods employed have been previously described by the authors (Izv.AN SSSR,Ser.viz.27,1297, 1963; 28,102,1964). The calculations were undertaken primarily to determine whether the failure so far to observe alpha transition to the low-lying 1^- state is compelling proof of its non-existence, as argued by H.D.Zeh and H.I.Mang (Nucl.Phys.29,

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529,1962). This question is of some importance, for it involves the existence or non-existence of tensor forces in the residual nuclear interactions. The description of the nuclei given by L.A.Sliv, G.A.Sogomayova and Yu.I.Kharitonov (Zhur. eksp.i teor.fiz.40,946,1961; Izv.AN SSSR,Ser.fiz.28,315,1964) on the basis of the shell model with central residual forces was employed in the calculations. According to this model, the lowest states of Tl206 are those of a $p_{1/2}g_{7/2}$ (0.1) doublet with very small separation, and the ground state of Bi210 is a mixture of many configurations of which $i_{11/2}h_{9/2}$ and $g_{9/2}h_{9/2}$ predominate. The reduced widths for transitions from either of the two bismuth states to the low-lying 1^- thallium state were found to be much smaller than the other reduced widths. The relative intensities of the alpha transitions were calculated from the reduced widths and the barrier penetration factors, and they are compared with the experimental results. Excellent agreement was found for the transitions to the 262 and 301 keV thallium levels. For the 654 and 800 keV levels, the intensity of the transition to one (depending on the assignment) was in good agreement with experiment, and that to the other was off by a factor 4. The calculations indicate that about 3% of the alpha transitions from the excited bismuth state should be to the low-lying 1^- thallium level. The transition probability was given by the calculations, however, as the

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ACCESSION NR: AP4042969

difference between two large numbers, and it might well be in fact much smaller. If one ignores configuration mixing and employs pure shell model states in the calculations, as did Zeh and Mang (loc.cit) one finds a much larger transition probability. It is concluded that the experimental data are not inconsistent with the existence of a low-lying 1^- level in Ti^{206} . "In conclusion, the authors express their deep gratitude to L.A.Sliv for his constant interest in the work and for a number of valuable remarks." Orig.art.has: 3 formulas, 1 figures and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskii institut im.A.F.Ioffe Akademii nauk SSSR (Physico-technical Institute, Academy of Sciences, SSSR)

SUBMITTED: OO

ENCL: OO

SUB CODE: NP

NR REF SOV: 003

OTHER: 005

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ACCESSION NR: AP4037592

S/0056/64/046/005/1782/1786

AUTHORS: Bukat, G. M.; Popov, N. P.

TITLE: Capture of muons by the B-10 nucleus

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1782-1786

TOPIC TAGS: boron, muon, muon capture, correlation technique, hyper-fine structure, mesic atom, self similarity model

ABSTRACT: Approximate equations are derived for nonstationary waves of finite amplitude in a rarefied plasma in the case of characteristic frequencies much smaller than the Larmor frequency, so that deviations from quasi-neutrality can be neglected. A class of one-dimensional solutions is obtained, which are self-similar with respect to some of the variable. These describe the propagation of waves with finite (but small) amplitude both parallel, transverse, and inclined to the magnetic field (but at a small angle), at a suf-

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ACCESSION NR: AP4037592

ficiently large distance from a source which is active for a limited time interval. "The authors are grateful to R. Z. Sagdeyev for continuous interest in the work and for useful discussions, and also to G. I. Guseva for help with the calculations." Orig. art. has: 3 figures and 57 formulas.

ASSOCIATION: Novosibirskiy gosudarstvennyy universitet (Novosibirsk State University)

SUBMITTED: 18Nov63

DATE ACQ: 09Jun64

ENCL: 00

SUB CODE: NP

NR REF SOV: 004

OTHER: 004

Card 2/2

BAKTYBAYEV, K.B.; BUKAT, G.M.

Alpha-decay of Ra^{222} and the level structure of radon isotopes.

Izv. AN SSSR. Ser. fiz. 28 no.7:1203-1206 J1 '64

(MIRA 17:8)

Alpha-ray reduced widths in Bi^{210} and the spectrum of levels in Ti^{206} . Ibid.:1229-1233.

1. Fiziko-tekhnicheskiy institut im. A.F. Ioffe AN SSSR.

L 20392-66 EWT(m) DIAAP
ACC NR: AP6005871

SOURCE CODE: UR/0367/65/002/004/0585/0595

AUTHOR: Baktybayev, K. B.; Bukat, G. M.

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-
tekhnicheskii institut Akademii nauk SSSR)

TITLE: Alpha decay and structure of nuclei in the region of Po^{208}

SOURCE: Yadernaya fizika, v. 2, no. 4, 1965, 585-595

TOPIC TAGS: lead, bismuth, radium, Alpha decay, nuclear structure, proton interaction, neutron interaction, wave function, nuclear spectroscopy

ABSTRACT: The authors calculate the alpha widths of the ground and excited levels of several nuclei in the vicinity of lead, such as Po^{212} , Bi^{213} , and Ra^{222} . The influence of the residual interaction and of the structure of the levels of the parent and daughter nuclei on the relative values of the alpha-decay amplitude is investigated. The calculations employed take into account the dynamics of the internal motion and explain in natural fashion many details of alpha decay, providing a better understanding of the connection between its characteristic and the energy and electromagnetic characteristics of the nuclei. It is shown that in addition to pp and nn interactions, an important role is played by np interactions in the cor-

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L 20392-66

ACC NR: AP6005871

2
relation of the four nucleons into an alpha cluster. The fact that the authors used the wave functions obtained by L. A. Sliv and his co-workers (ZhETF v. 36, 539, 1959; Nucl. Phys. v. 28, 192, 1960) without additional assumptions or new parameters, offers evidence that these functions represent with sufficient accuracy the properties of the nucleus as a system of interacting nucleons. The results show that the study of alpha decay yields valuable information on the structure of the nuclear levels and the character of the residual interaction on the nucleons. Conversely, alpha decay can be used for nuclear spectroscopy since it facilitates the identification of the levels. The authors thank Professor L. A. Sliv for continuous interest in the work and Professor J. O. Rasmussen for a useful discussion. Orig. art. has: 1 figure, 5 formulas, and 7 tables.

SUB CODE: 20/ SUBM DATE: 25Jan65/ ORIG REF: 004/ COTH REF: 012

Card 2/2

ULR

BUKAT, M.; KAMYSHKIN, L.; ATANAZEVIKH, V.; YAKIMOVICH, V.

Putting suggestions of efficiency promoters into practice at grain
receiving stations of Kazakhstan. Muk.-elev. prom. 24 no.7:26-30
Jl '58. (MIRA 11:10)

1.Kustanayskoye oblastnoye upravleniye khleboproduktov (for all
except Yakimovich). 2.Ministerstvo khleboproduktov Kazakhskoy SSR
(for Yakimovich).

(Kazakhstan--Grain-handling machinery)

BUKAT, M. (Kustanay TSelinogradskoy oblasti)

Problem concerning the drying of grain and bean crops in the
Virgin Territory. Muk.-elev. prom. 28 no.5:13-14 My '62.
(Kazakhstan--Grain--Drying) (Kazakhstan--Beans--Drying) (MIRA 15:5)

BUKATA, J.

The 23rd Scientific-Technical Conference. Przegl geod 33 no.9:346
'61.

BUKATCHUK, P.D.

Stratigraphy and the current state of the study of Triassic
sediments in the Carpathian Mountains of Northern Bukovina.
Nauch.dokl.vys.shkoly; geol.-geog.nauki no.2:10-13 '59.
(MIRA 12:8)

1. Moldavskaya geologicheskaya ekspeditsiya.
(Carpathian Mountains--Geology, Stratigraphic)

BUKATCHUK, P.D.

Tectonic pattern of the frontal part of the northeastern wing of the inner anticlinal (Magursk) zone of the Carpathians in Northern Bukovina. Biul.MOIP.Otd.geol. 35 no.2:43-51 Mr-Apr '60.

(Chernovtsy Province—Geology, Structural)

(MIRA 14:4)

BUKATCHUK, P.D.

Clay minerals of rocks of the Rakhov and Burkutsk series in the
Northern Bukovina Carpathians. Geol.zhur. 22 no.2:72-82 '62. (MIRA 15:4)

1. Durleshts'ka geologichna ekspeditsiya, m. Kisheniv.
(Bukovina--Clay)

BUKATCHUK, P.D.; BURDENKO, B.V.; YANOVSKAYA, G.A. [IANov's'ka, H.A.]

Age of the Upper Cretaceous tripoli-siliceous rocks of the
middle Dniester Valley. Dop. AN URSR no.11:1420-1522 '64.
(MIRA 18:1)

1. Upravleniye geologii i okhrany neдр pri Sovete Ministrov
Moldavskoy SSR. Predstavleno akademikom AN URSR V.G.
Bondarchukom [Bondarchuk, V.H.].

BOBRINSKIY, V.M.; ~~BUKATCHUK, P.D.~~; BURGELYA, N.K.; DRUMYA, A.V.;
KAPTSAN, V.Kh.; MAKARESKU, V.S.; NEVRYANSKIY, D.G.;
NEGADAYEV-NIKONOV, K.N.; PERES, F.S.; ROMANOV, I.F.;
ROSHKA, V.Kh.; SAFAROV, E.I.; SAYANOV, V.S.; SOBETSKIY,
V.A.; TKACHUK, V.A.; KHUBKA, A.N.; EDEL'SHTEYN, A.Ya.;
LUTOKHIN, I., red.

[Paleogeography of Moldavia] Paleogeografia Moldavii.
Kartia, moldoveniaske, 1965. 145 p. (MIRA 18:9)

1. Otdel palenotologii i stratigrafii AN Moldavskoy SSR
(for Negadayev-Nikonov, Roshka, Romanov, Sobetskiy, Khubka).
2. Institut geologii i poleznykh iskopayemykh Gosudarstvennogo
geologicheskogo komiteta SSSR (for Bobrinskiy, Burgelya,
Nevryanskiy, Tkachuk, Edel'shteyn). 3. Opornaya stoymostantsiya
AN Moldavskoy SSR (for Drumya). 4. Gosudarstvennyy proizvod-
stvennyy geologicheskii Komitet Moldavskoy SSR (for Bukatchuk,
Kaptan, Safarov).

BUKATCHUK, P.D.

Stratigraphic position of diabases in the Kr-menchug region
(middle Dniester Valley). Dop. AN URSS no.3:358-362 '65.

(MIRA 18:3)

1. Upravleniye geologii i okhrany nedr pri Sovete ministrov
Moldavskoy SSR.

BUKATCHUK, P.D.

Remarks concerning rocks in the Northern Bukovina Carpathians
not commonly found in the Rakhov flysch. Geol. zhur. 25
no.2:100-102 '65. (MIRA 18:6)

1. Kompleksnaya geologotematicheskaya partiya, Kishinev.

BOBRINSKAYA, O.G.; BOBRINSKIY, V.M.; BUKATCHUK, P.D.; DANICH, M.M.;
KAPTSAN, V.Kh.; NEGADAYEV-NIKONOV, K.N.; POPOVA, T.V.;
ROSHKA, V.Kh.; SAFAROV, E.I.; SOBETSKIY, V.A.; EDEL'SHTEYN,
A.Ya.; BURGELYA, N.K., red.; DRUMYA, A.V., red.; KUZNETSOVA,
E., red.

[Stratigraphy of sedimentary formations in Moldavia] Strati-
grafia osadochnykh obrazovani Moldavii. Kishinev, Kartia
moldoveniaske, 1964. 129 p.
MIRA 19:1)

1. Otdel paleontologii i stratigrafii AN Moldavskoy SSR (for
Bobrinskaya, Danich, Negadayev-Nikonov, Popova, Roshka,
Sobetskiy). 2. Institut geologii i poleznykh iskopayemykh,
gorod Kishinev (for Bobrinskiy, Edel'shteyn). 3. Upravleniye
geologii i okhrany neдр pri Sovete Ministrov Moldavskoy SSR
(for Bukatchuk, Kaptsan, Safarov).

BUKATIK, S., master

More attention to young workers. Sov. profsoiuzy 6 no.4:66-69
Ap '58.

(MIRA 11:5)

1. Motornyy tsekh Minskogo traktornogo zavoda.
(Minsk--Tractor industry)
(Technical education)